

REMARKS

Claims 52-89 remain pending in this patent application for a total of 38 pending claims. Claims 1-51 have been canceled (without prejudice). Three independent claims (claims 52, 54, and 73) are currently pending and the total number of claims is less than the 51 claims that were filed with the original application. Claims 52 and 54 have been amended herein (without prejudice), while claim 53 is as previously presented and claims 55-89 are new. Applicants submit that no new matter has been introduced by any of the claim amendments or new claims. Specifically, support for the claim amendments can be found in the original disclosure, including in the originally filed claims, for example. Additional support can be found in FIG. 20 and paragraphs 0193-0195 and 0203 (of the published patent application, US 2007/0210186). Support may be found in other portions of the original disclosure as well.

In the Office Action, the Patent Office objected to the drawings alleging that the drawings do not show a "closed mixing chamber" as recited in some of the claims that were pending at that time. Without consenting to this objection, Applicants have canceled (without prejudice) all of the claims that recited a "closed mixing chamber", rendering this objection moot. Reconsideration and withdrawal of this objection in light of the claim amendments is requested. Additionally, the Patent Office rejected claims 1-12, 14-24, 29, and 30 under 35 U.S.C. 112, 102, 103, or a combination thereof, citing various reasons. Without consenting to these rejections, Applicants have canceled (without prejudice) all of these claims, rendering these rejections moot. Reconsideration in light of the claim amendments is requested.

The Patent Office also rejected claims 52-54 under 35 U.S.C. 102 and 103, citing US Patent 5,779,159 (Williams) alone or in combination with US Patent 5,810,252 (Pennamen). Without consenting to these rejections, Applicants have amended (without prejudice) claims 52 and 54. Applicants submit that, at least as amended, the current claims are patentable over Williams and Pennamen because these two references are not properly combinable, and even if combined, Williams and Pennamen do not teach or suggest all of the limitations of any of the pending claims.

Williams concerns a fire fighting nozzle that mixes water with an additive to make foam (title, abstract, col. 3, lines 7-25, col. 5, line 53-col. 6, line 39). Williams does not purport to (and does not) concern or describe an apparatus for generating a mist. The claimed invention, however, makes clear that it is directed to a particular type of apparatus, namely, one that generates a mist. Importantly, the claimed invention is not directed to an apparatus, like Williams, that generates a foam. Thus, since the Williams reference is directed to a completely different type of apparatus (foam vs. mist), it clearly does not anticipate or render the claimed invention obvious. Pennamen concerns atomizing petroleum distillate residue for purposes of combustion (abstract, col. 1, lines 12-15). Applicants submit that it would not be appropriate to combine Williams with Pennamen, or with any other reference, to arrive at the present invention. Applicants submit that there would have been no motivation, from the references themselves, to combine or modify any of the cited references to arrive at the present invention.

In addition, even if these two references could be combined, Williams and Pennamen do not teach or suggest all of the limitations of any of the pending claims. Specifically, neither Williams nor Pennamen teach or suggest:

a working nozzle...wherein the working nozzle is defined by a working nozzle outer surface facing inward toward the apparatus axis and a working nozzle inner surface facing outward away from the apparatus axis; wherein at least part of the working nozzle outer surface converges toward the apparatus axis in a direction along the apparatus axis toward the outlet

as recited in claim 52. In addition, Applicants submit that neither Williams nor Pennamen teach or suggest a:

first fluid passage comprising a first annular portion concentric with the apparatus axis, the first annular portion having a first outer surface facing inward toward the apparatus axis and a first inner surface facing outward away from the apparatus axis; wherein at least part of the first

outer surface converges toward the apparatus axis in a direction toward the first fluid outlet

as recited in claim 54. Furthermore, Applicants submit that neither Williams nor Pennamen teach or suggest a:

first fluid passage comprising a first annular portion concentric with the apparatus axis, the first annular portion having a first outer surface facing inward toward the apparatus axis and a first inner surface facing outward away from the apparatus axis; wherein at least part of the first outer surface converges toward the apparatus axis in a direction toward the outlet end

as recited in claim 73. Applicants submit that these limitations, especially in combination with the other limitations in each of these independent claims, are not found in the cited references. For example, in Williams, any surfaces that might be construed as being analogous, diverge outward away from the apparatus axis, or remain parallel to the apparatus axis, in the direction toward the outlet end (e.g., FIGS. 1, 2A, 2B, and 5).

Moreover, Applicants submit that the various embodiments of the invention currently claimed provide for a surprisingly superior apparatus for generating a mist. For example, in some embodiments, such an apparatus may be used to generate water droplets of a desired size for improved suppression of fires over the prior art in this area of technology.


Further, Applicants submit that the dependent claims are also patentable over the cited references because the dependent claims depend upon claims that are patentable. Further still, the dependent claims may have other limitations that are not taught or suggested by the prior art of record, and may be patentable for those reasons as well. Allowance of both independent and dependent claims is requested.

Applicants submit that all of the pending claims are in a form suitable for allowance and request that Examiner Cernoch proceed to allow a patent to issue with

all of the pending claims. Should the Examiner have any questions or concerns about this patent application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

Date: 3-17-09

By 
Allan W. Watts, U.S. Reg. No. 45,930
Bryan Cave LLP
Two North Central Avenue, Suite 2200
Phoenix, AZ 85004-4406
allan.watts@bryancave.com
Direct: 602-364-7331